

Fig. 1a

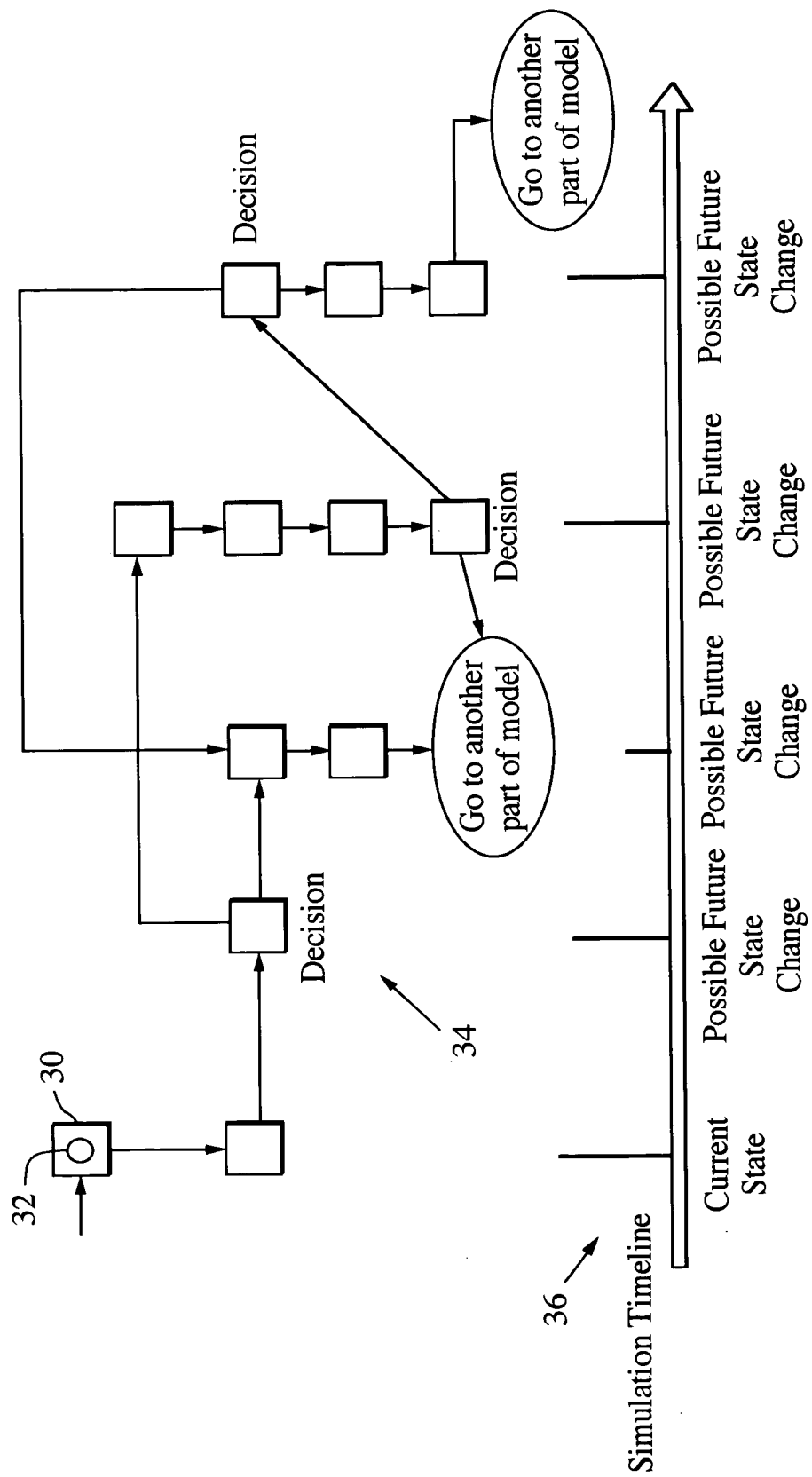


Fig. 1b

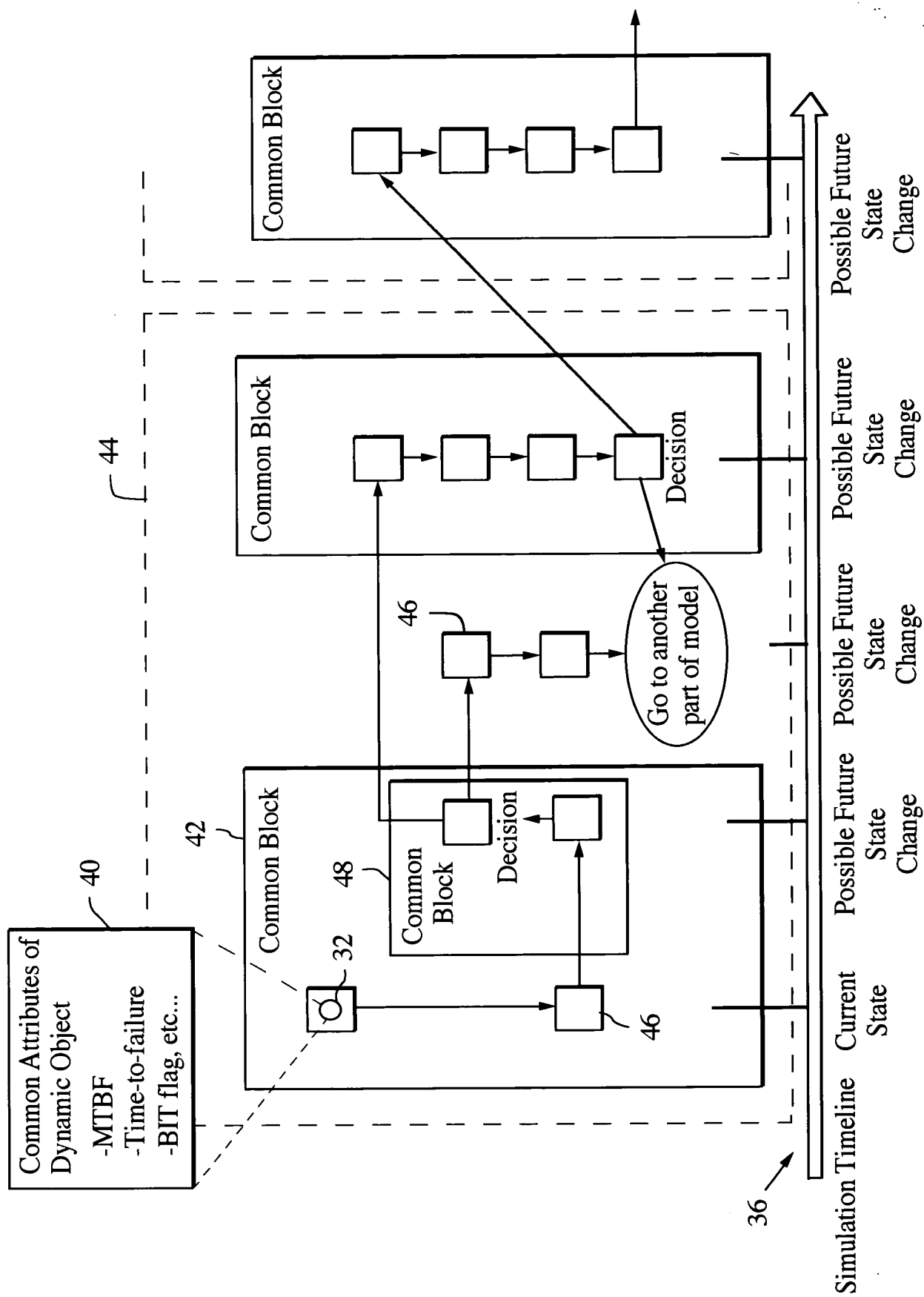


Fig. 1c

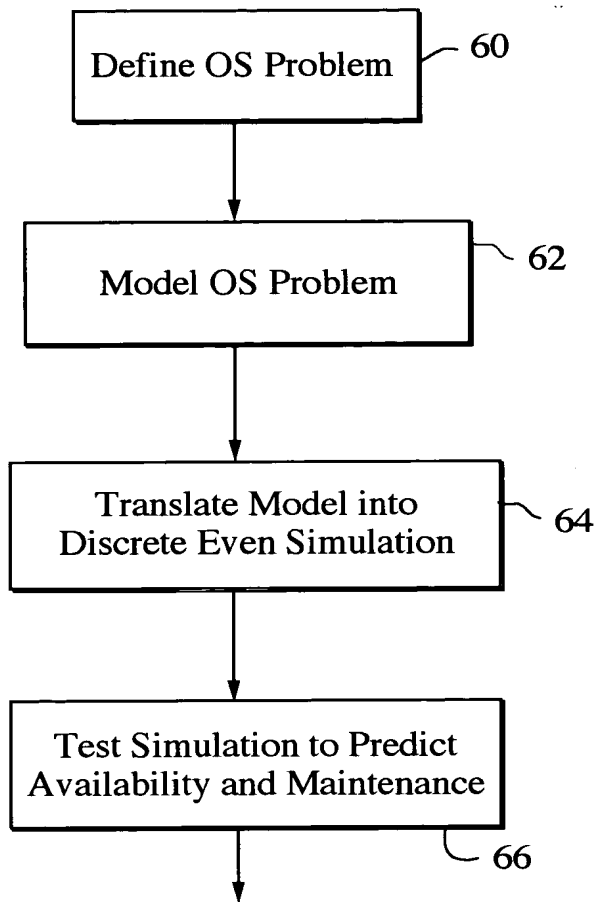


Fig. 2

140

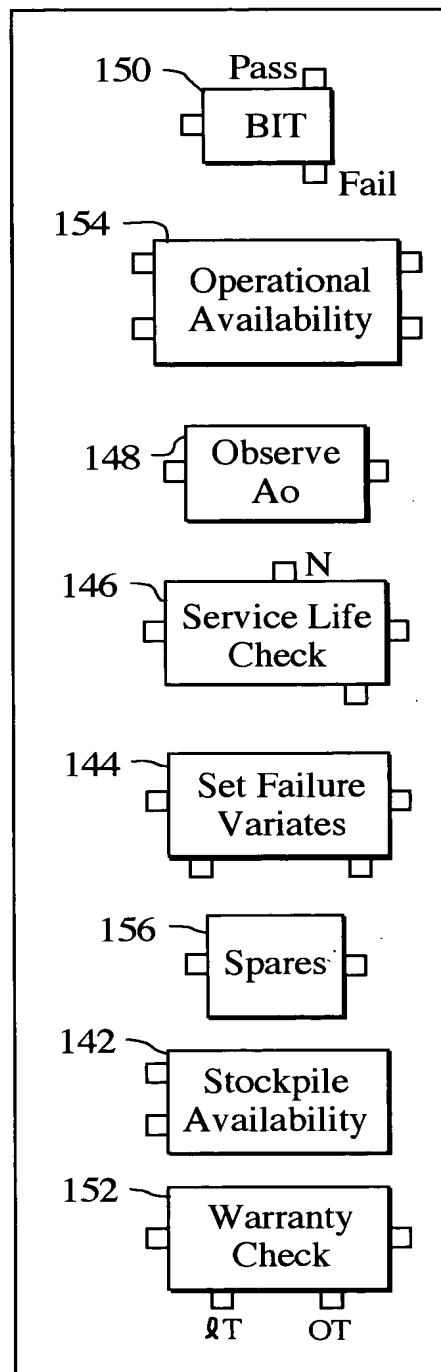


Fig. 7

| ATTRIBUTE (m=multiple) | PURPOSE |
|------------------------------|--|
| Birth Date 82 | Stores times at which Hardware first enters the O&S process. |
| TTF Variate (m) 84 | Stores time at which hardware will fail. Randomly determined. Multiple attributes for multiple environments. These are set/reset whenever hardware is issued/reissued. |
| Duty Cycle (m) 86 | Accumulators for time or cycles spent in various states/environments. These are reset to zero whenever hardware is reissued. |
| Warranty Cycle (m) 88 | Accumulators for time or cycles spent in various states/environments. These are never reset. |
| Down Time 90 | Accumulator for time spent while hardware is not RFI. |
| MTBF Variate (m) 92 | Stores Mean Time Between Failure for specific environments. These can change over time to approximate reliability growth or hardware degradation over time. |
| BitDetectable 94 | Randomly generated flag to indicate if a test will be effective at detecting a failure in the weapon hardware. |
| Weapon Variant (m) 96 | Marks the dynamic object as being a particular type of weapon. |
| GodsEye 97 | Marks the dynamic object that is in a failed state as being failed, if the dynamic object has a failure not detectable by field BIT. |

Fig. 3



| | |
|--|---|
| Decomposition of SUP & calculation of time-based observations. | Common Blocks |
| Assessing availability, predicting repair action (warranted & not warranted), predicting spare part requirements. characterizing multiple failure on a weapon. | Sub-Models |
| Service Use Profile | DES Static Object |
| Weapon Hardware Unit | DES Dynamic Object |
| Decision Occurrence during Weapon System Life-cycle | State Change during Simulation |
| Specific Characteristic of Individual Weapons | Attributes of Dynamic Objects |
| Special Treatment for Sub-populations of Weapons | Dynamic Object interaction with DES Static Object, through attributes values common among sub-groups of Dynamic Objects. |

Fig. 4

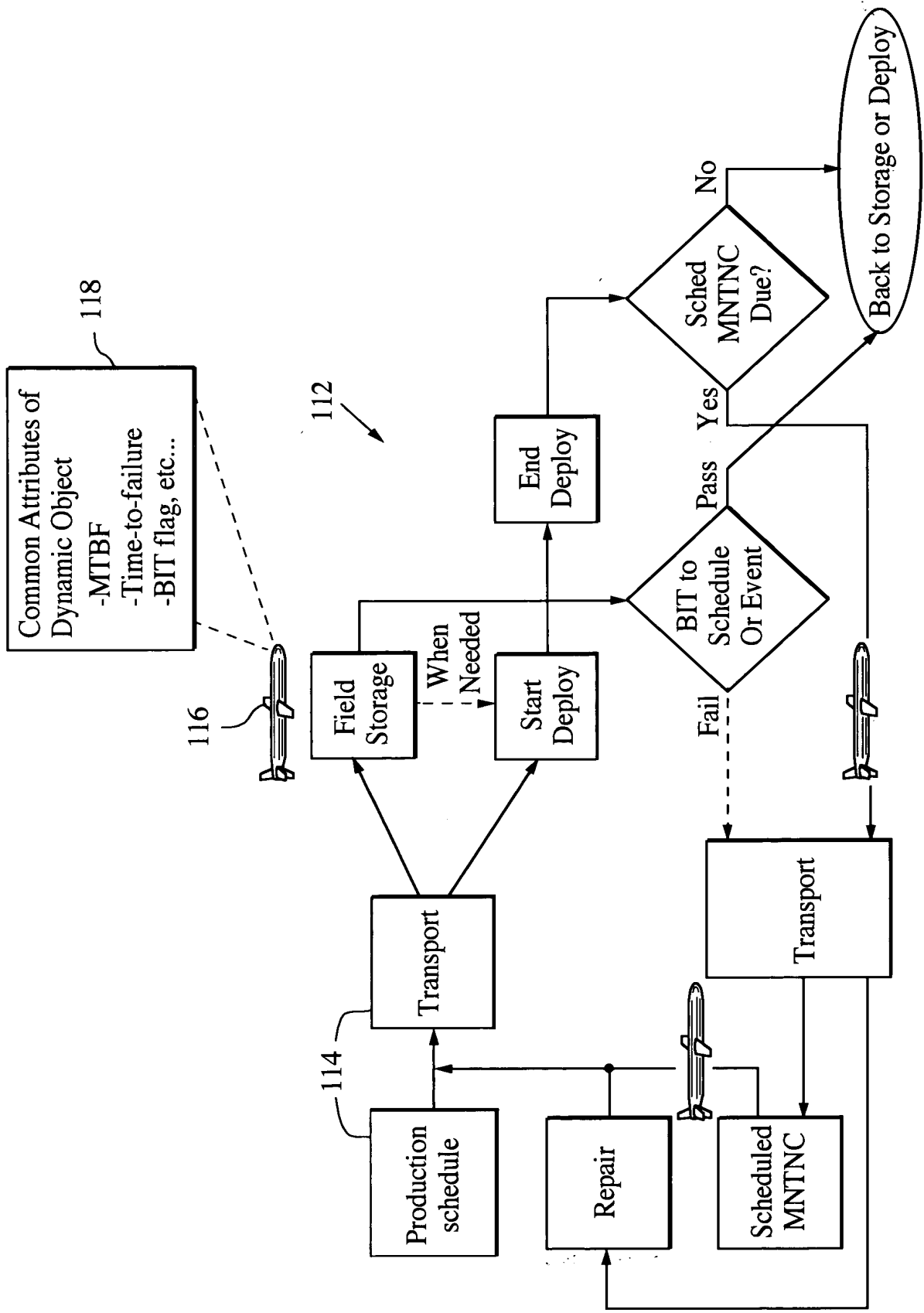


Fig. 5

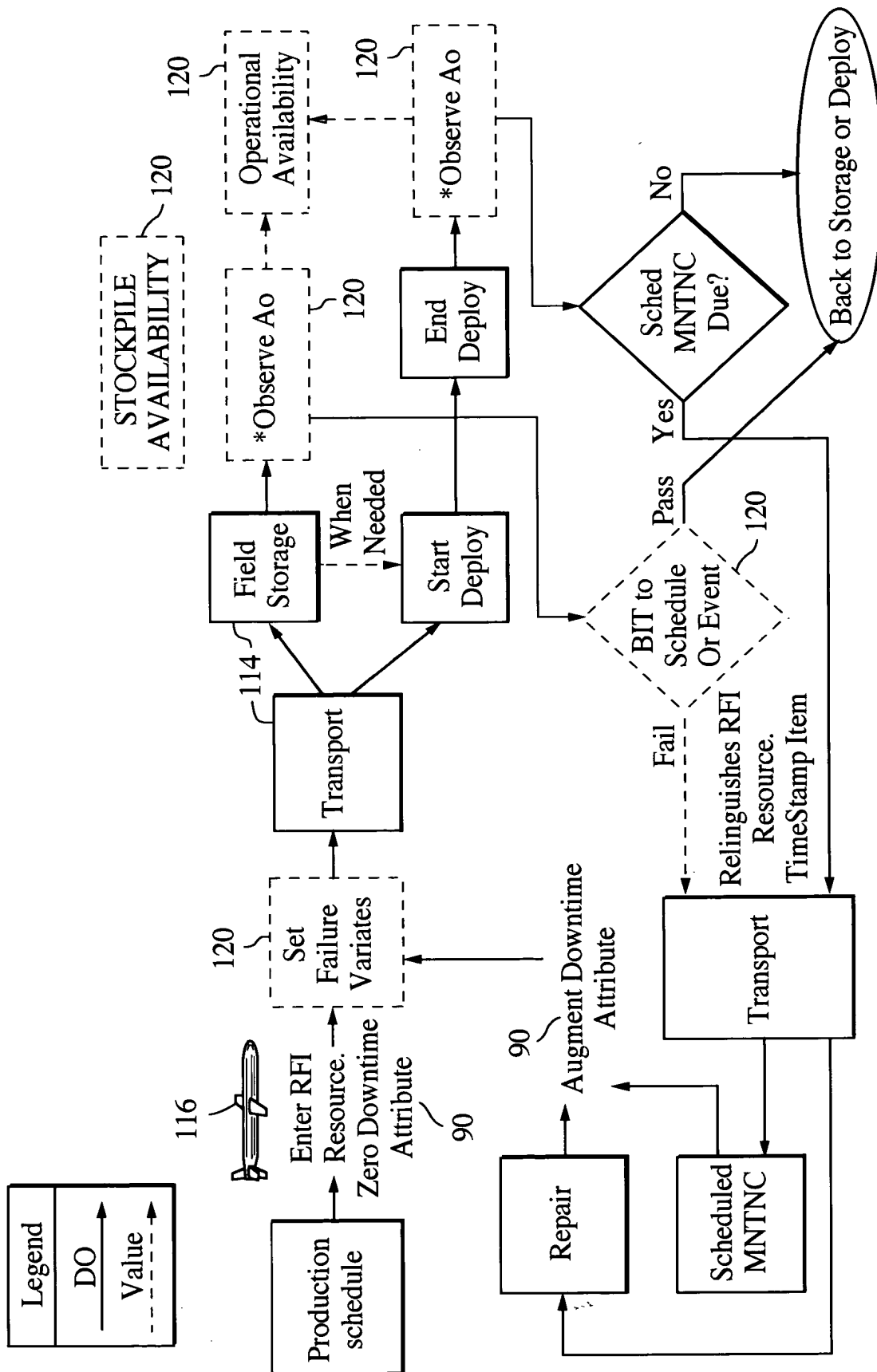


Fig. 6

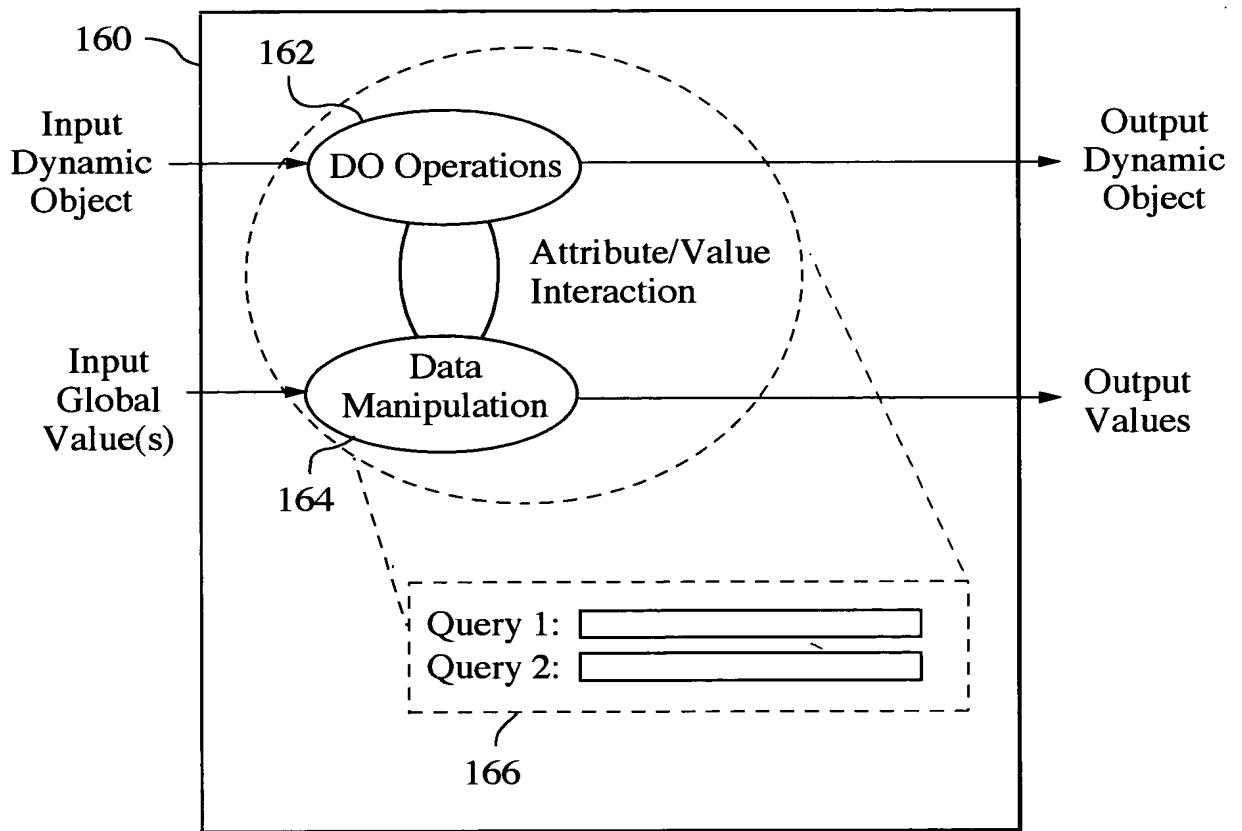
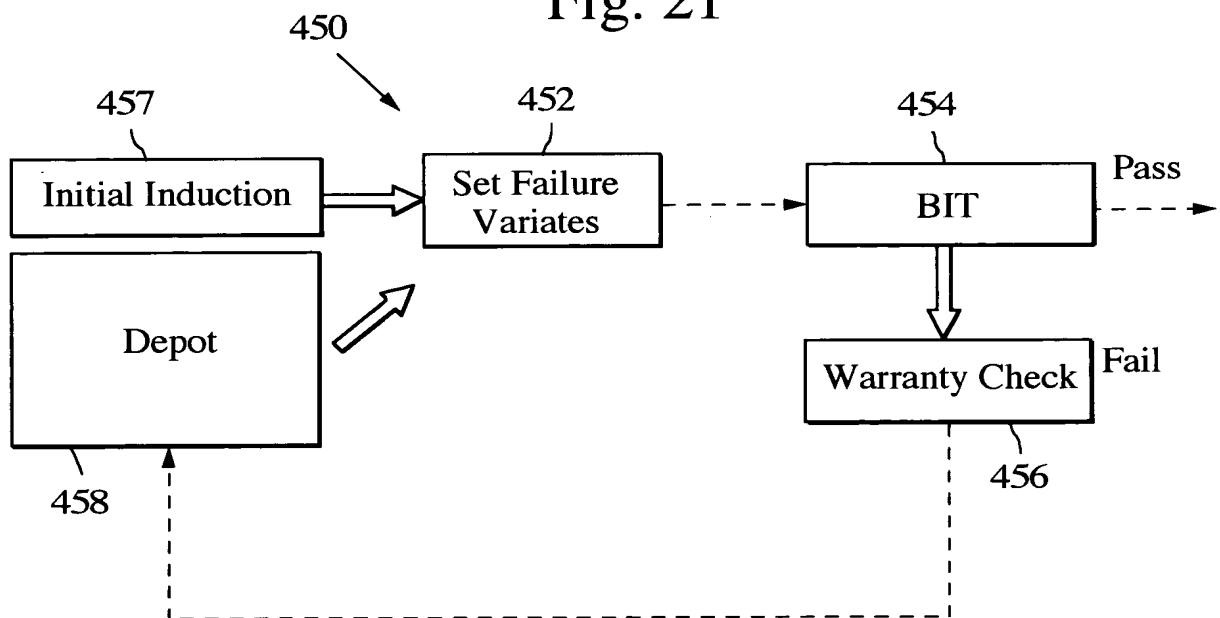


Fig. 8

Fig. 21



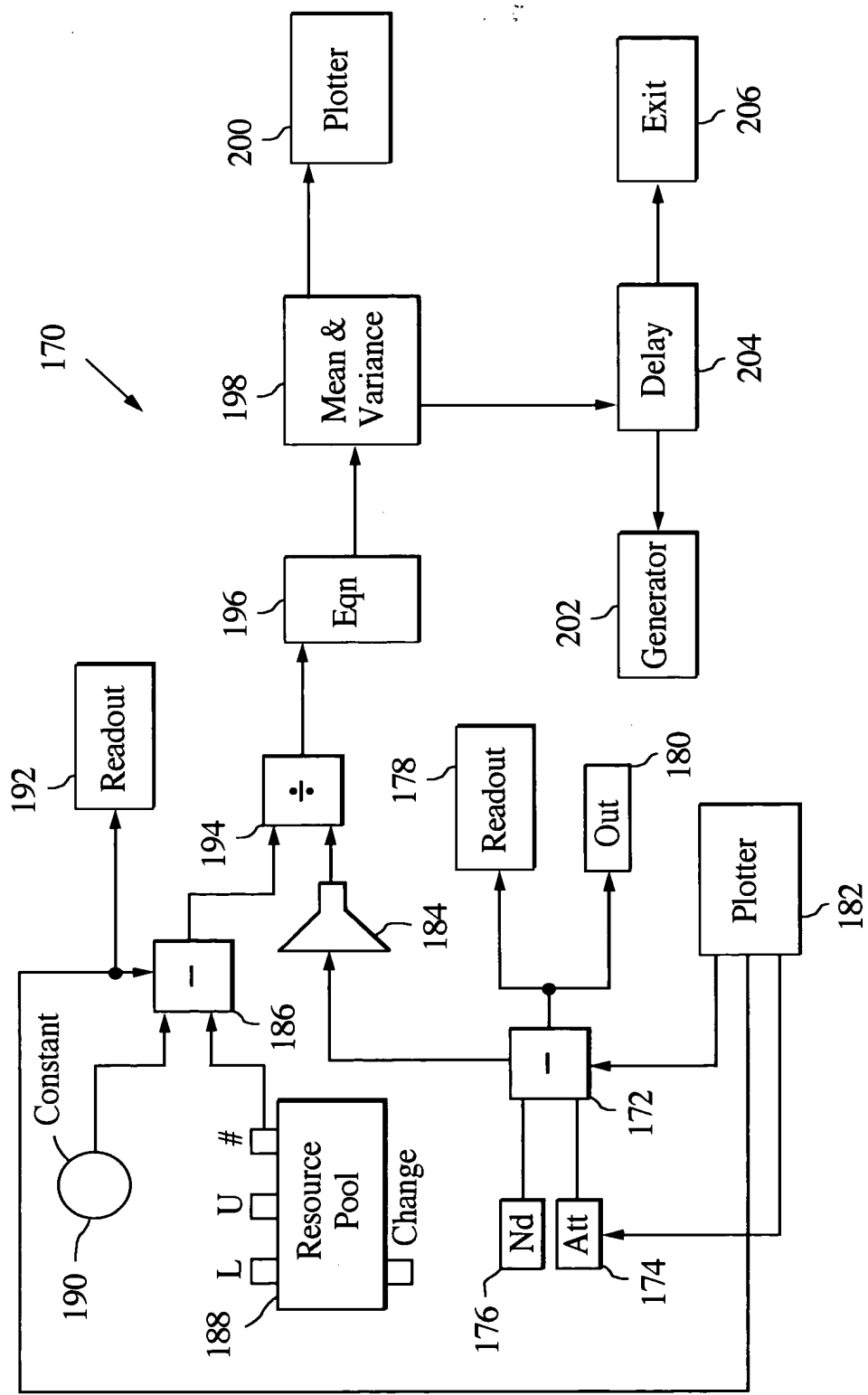


Fig. 9

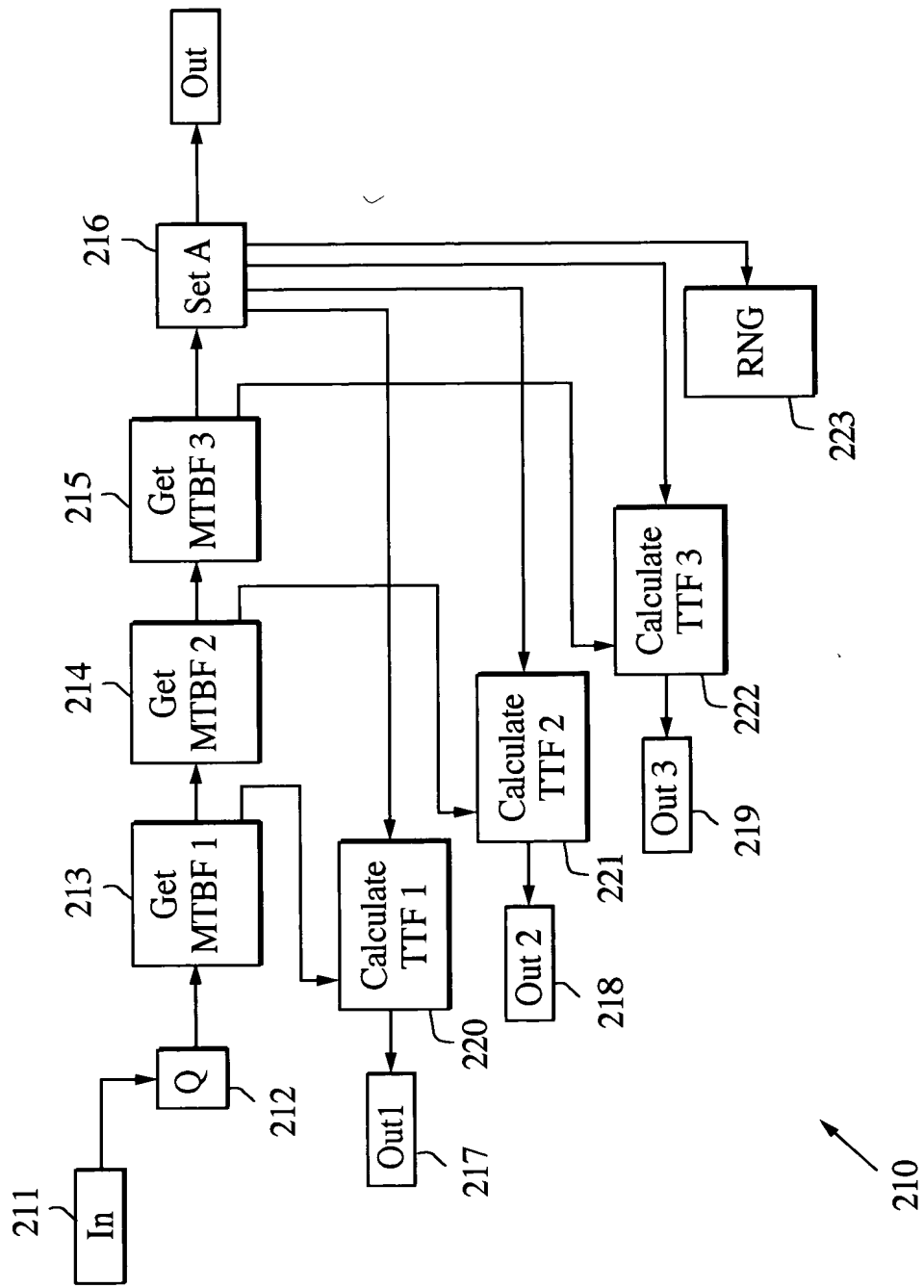


Fig. 10

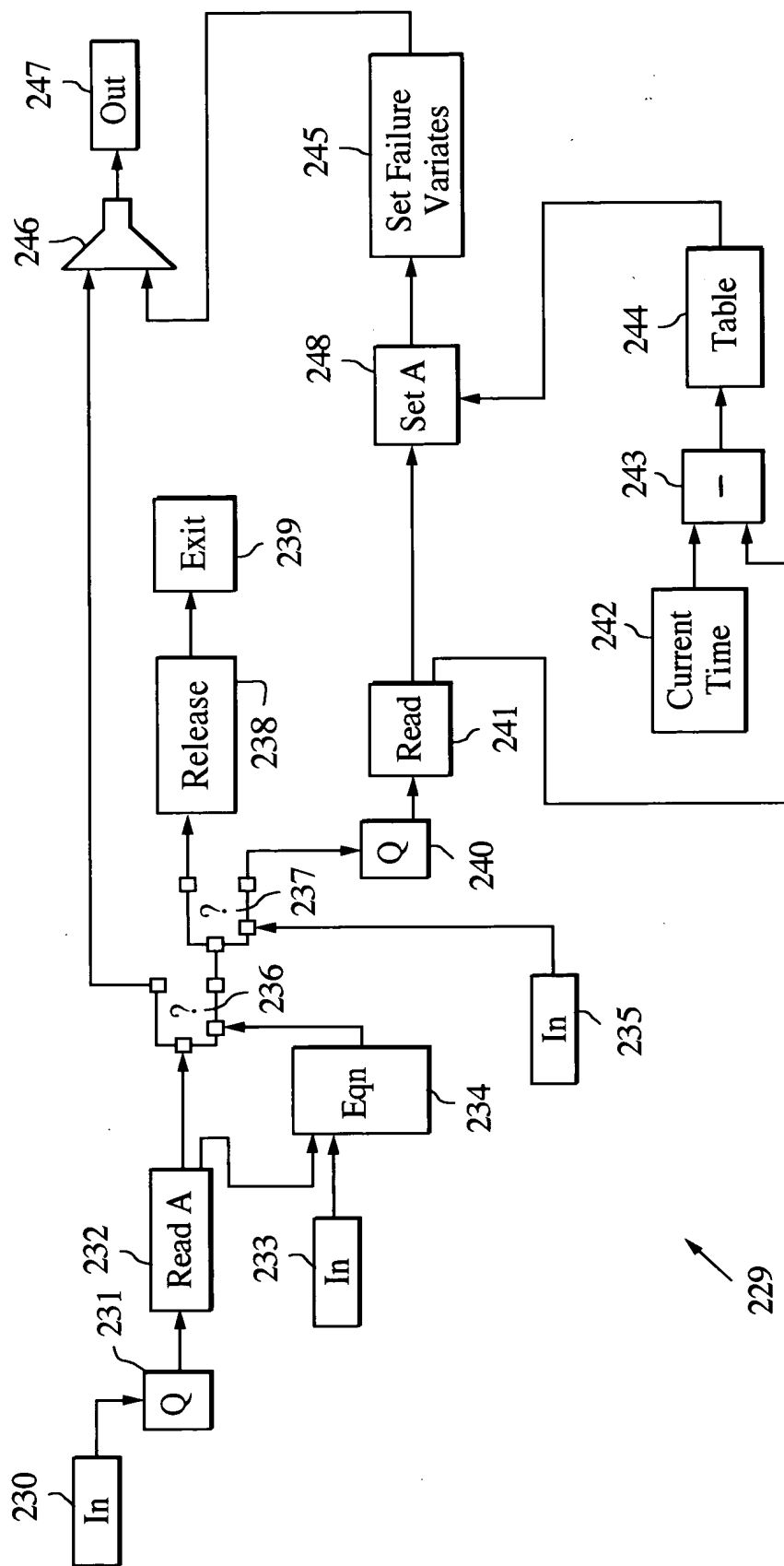


Fig. 11

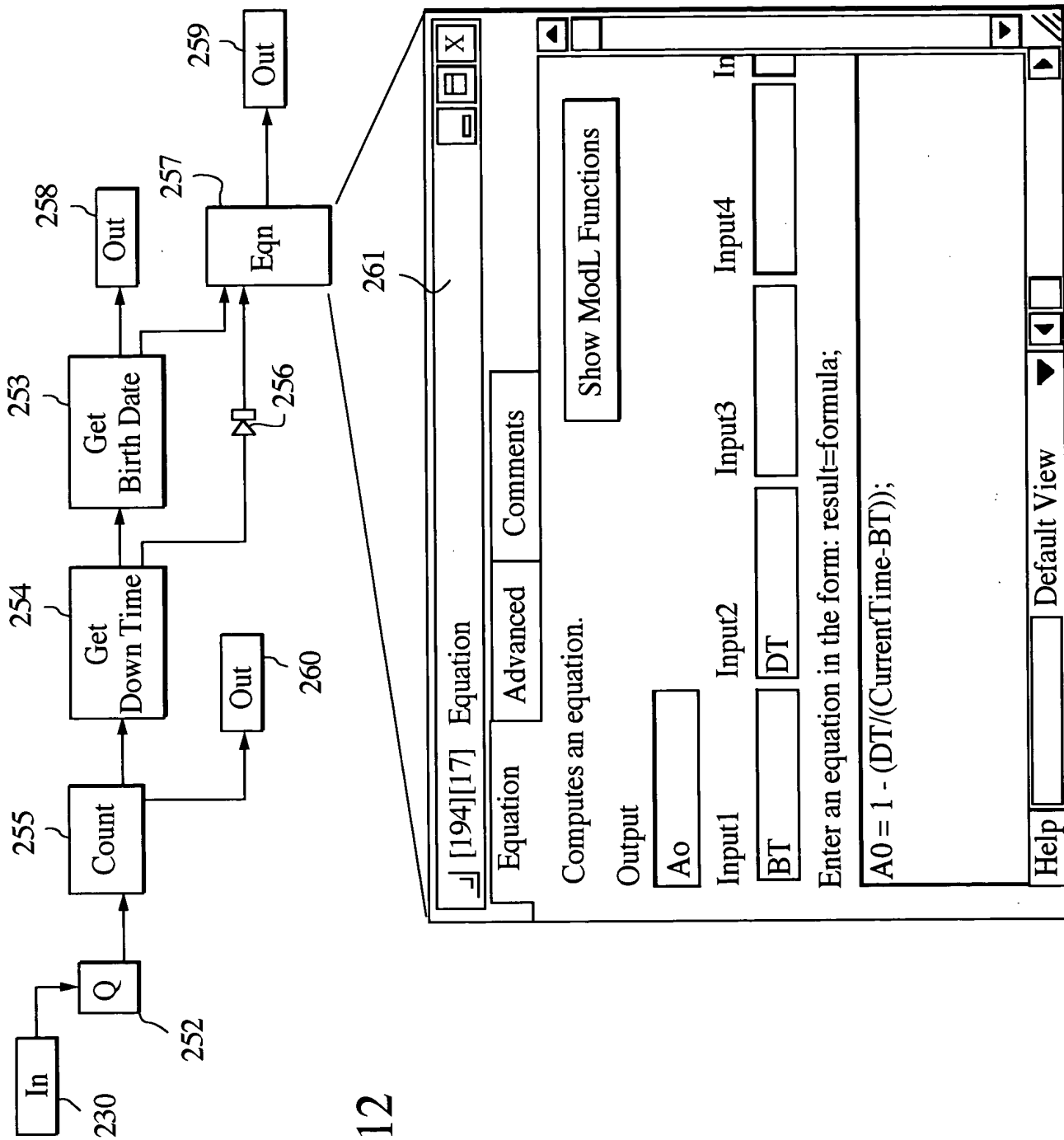


Fig. 12

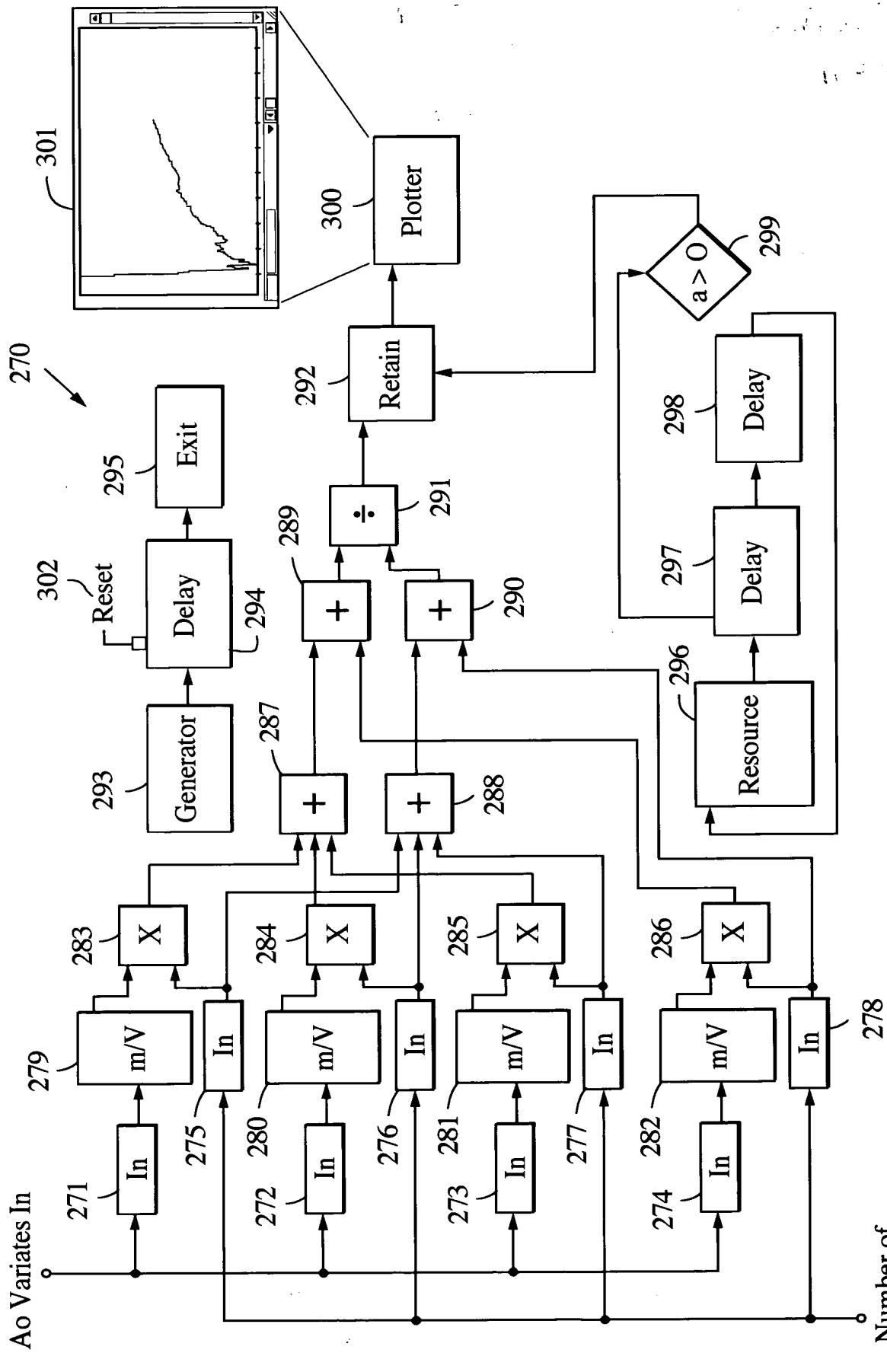


Fig. 13

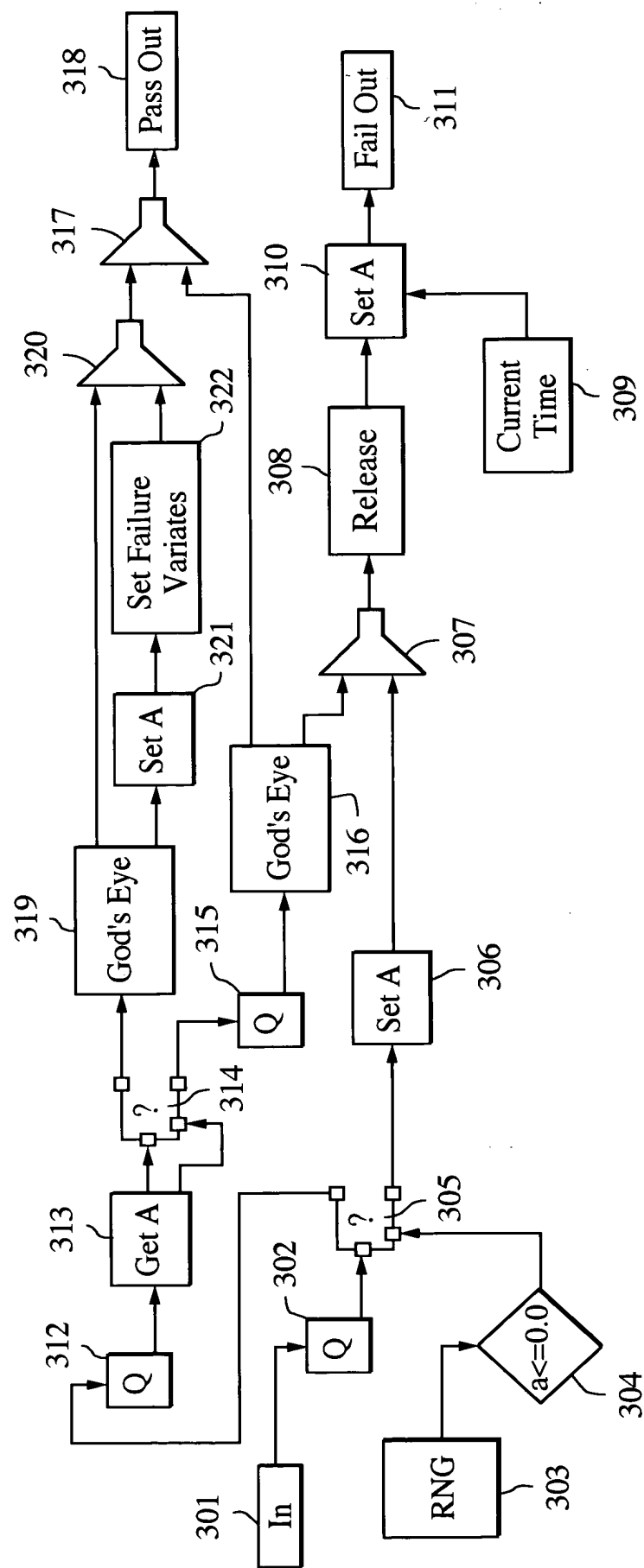


Fig. 14

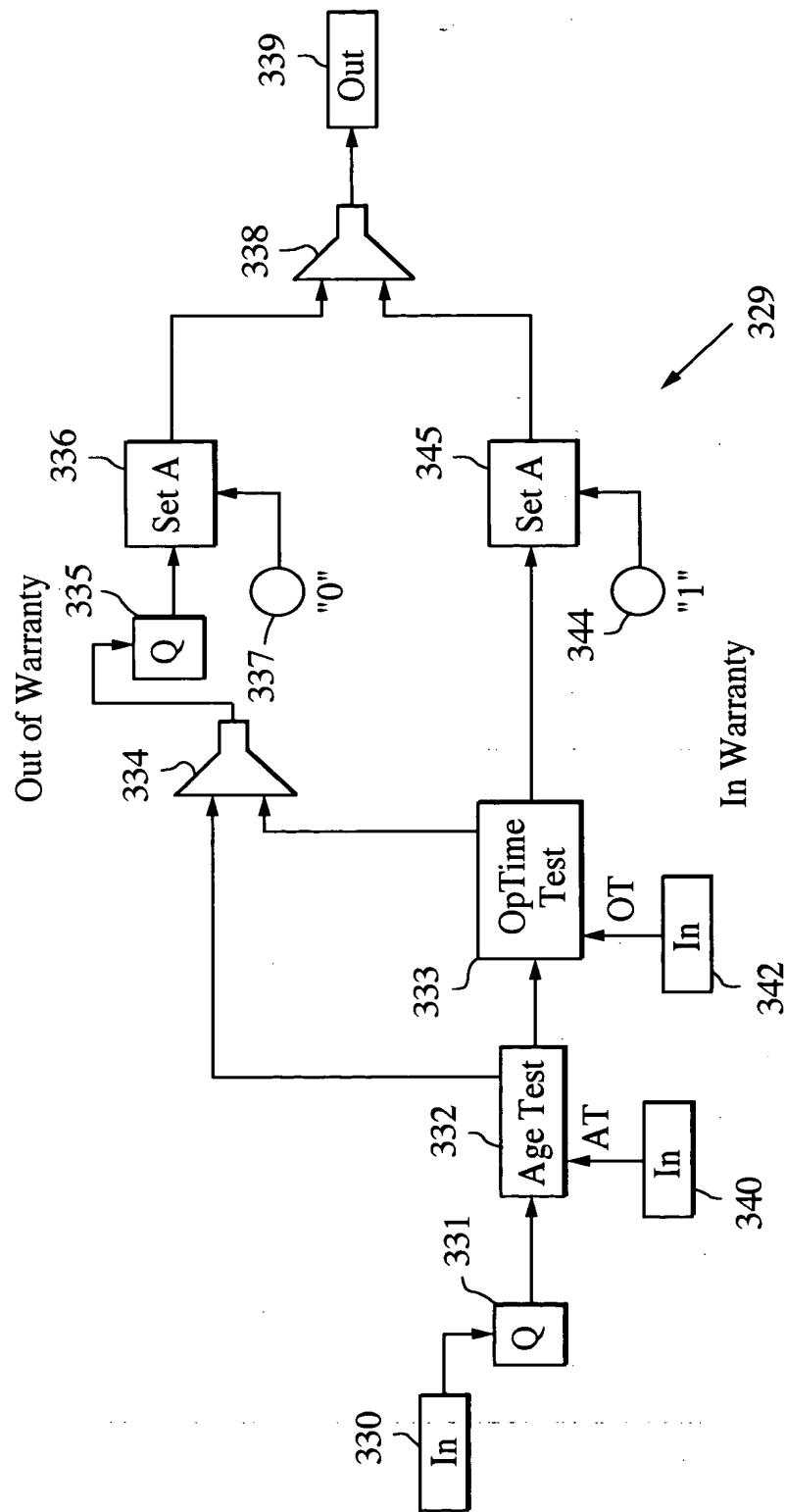


Fig. 15

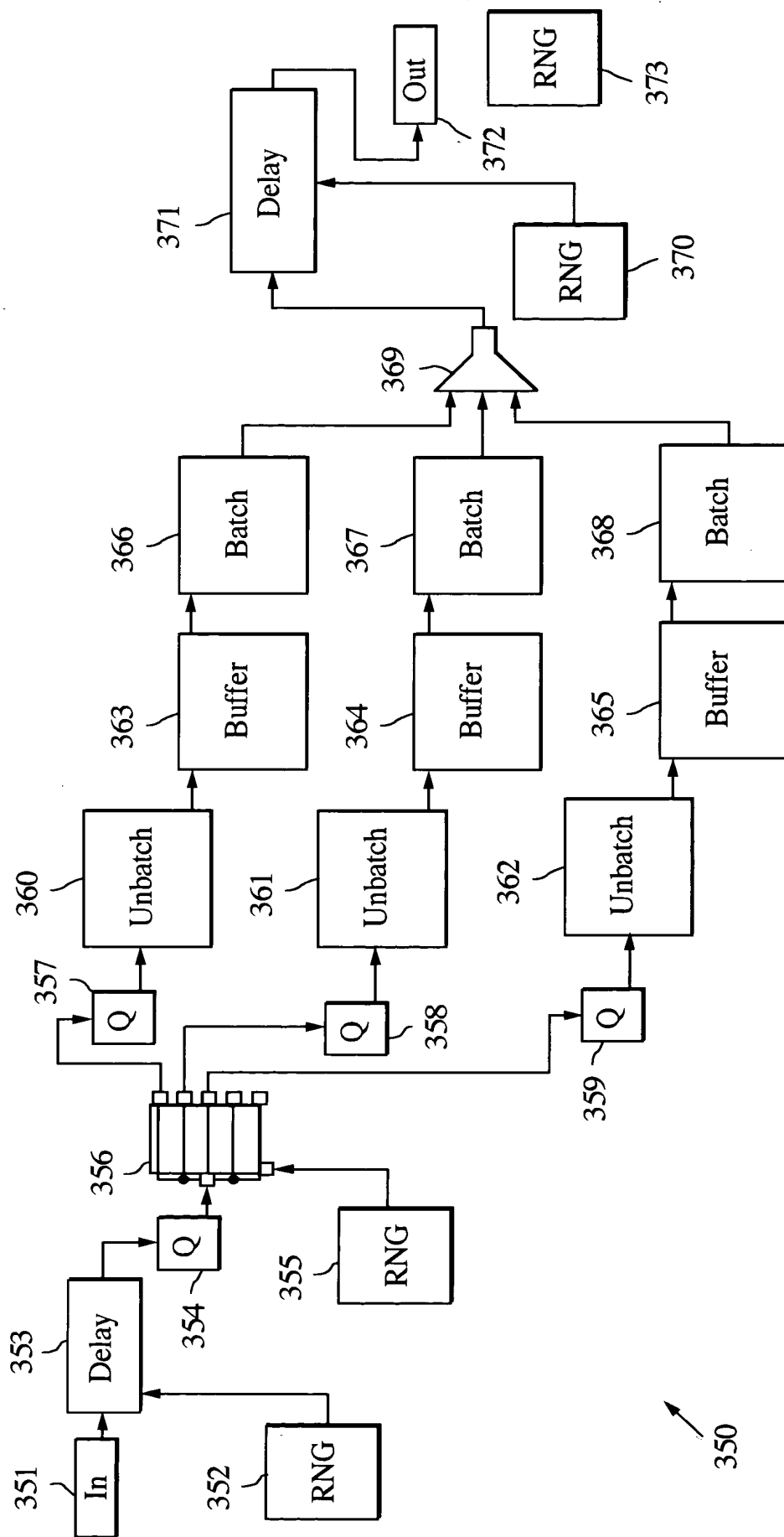


Fig. 16a

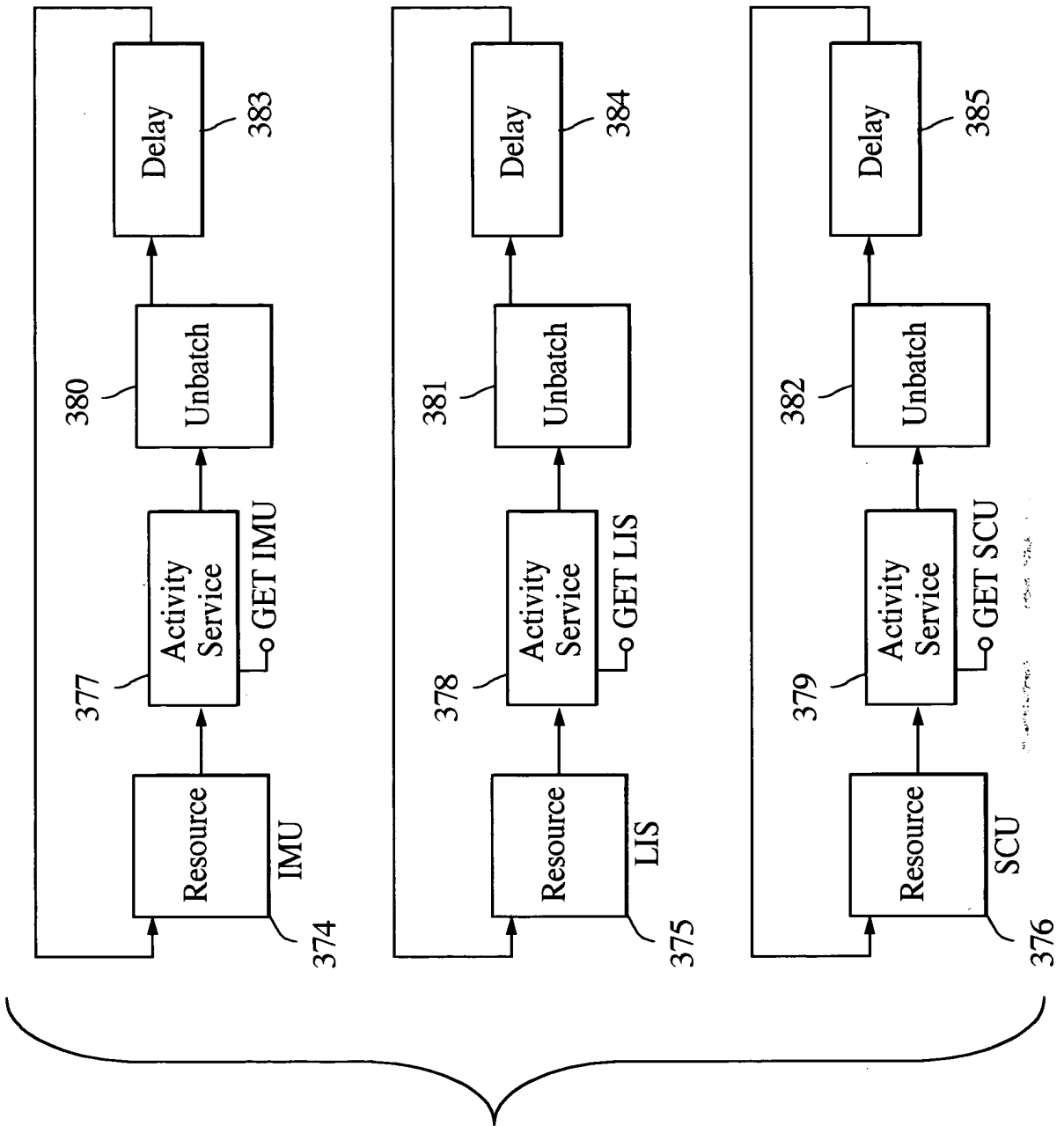


Fig. 16c

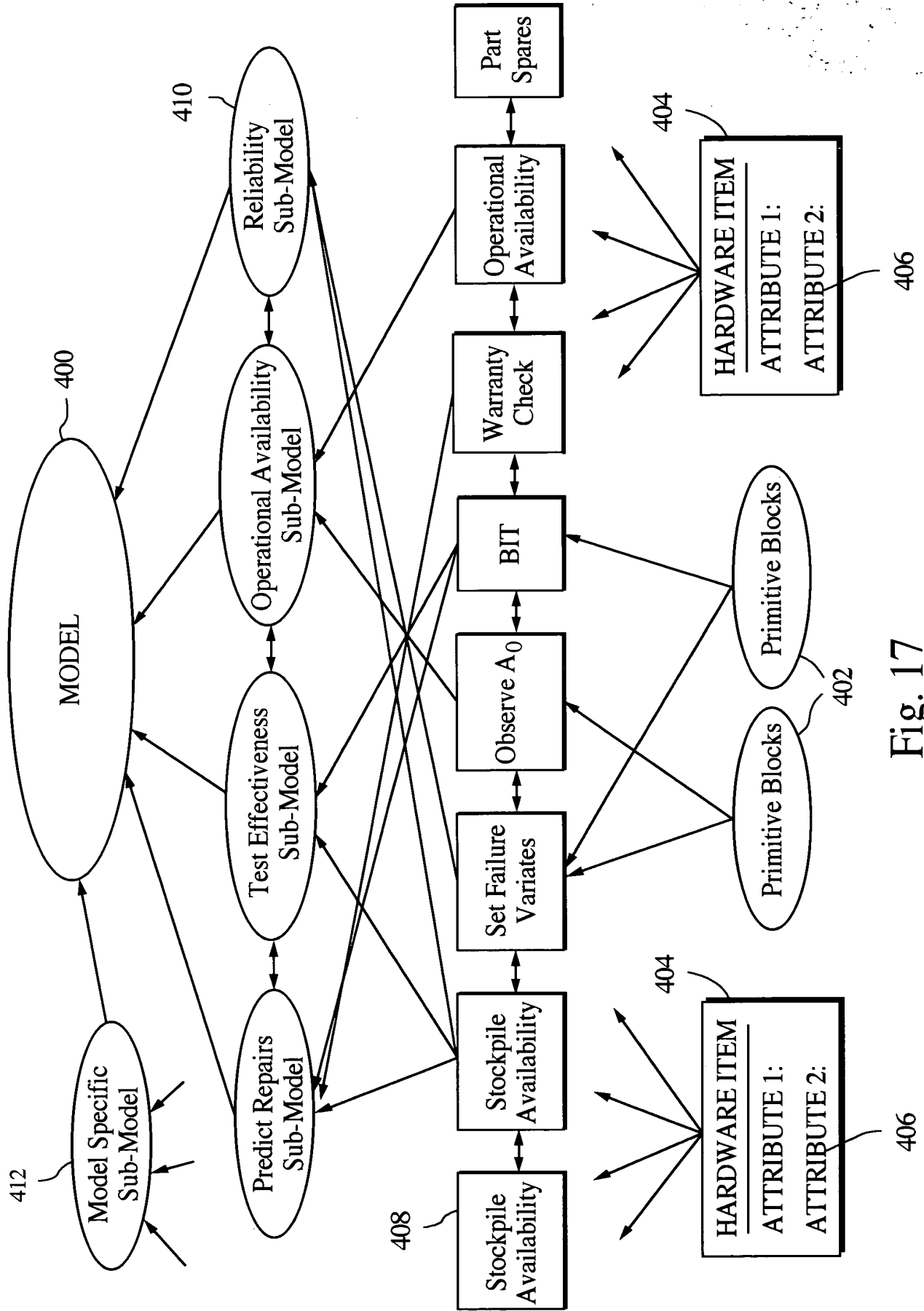


Fig. 17

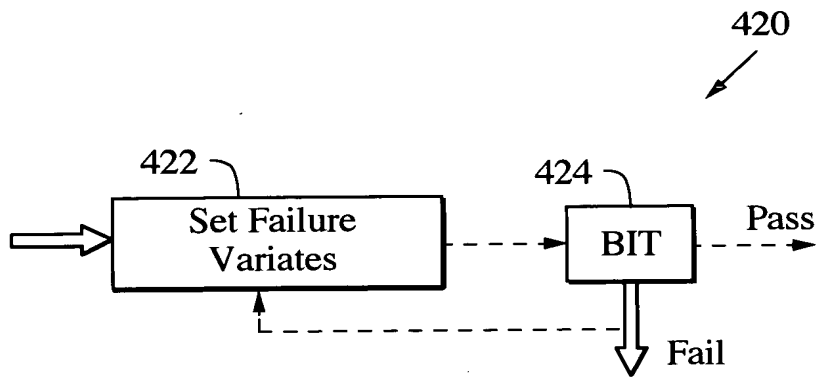


Fig. 18

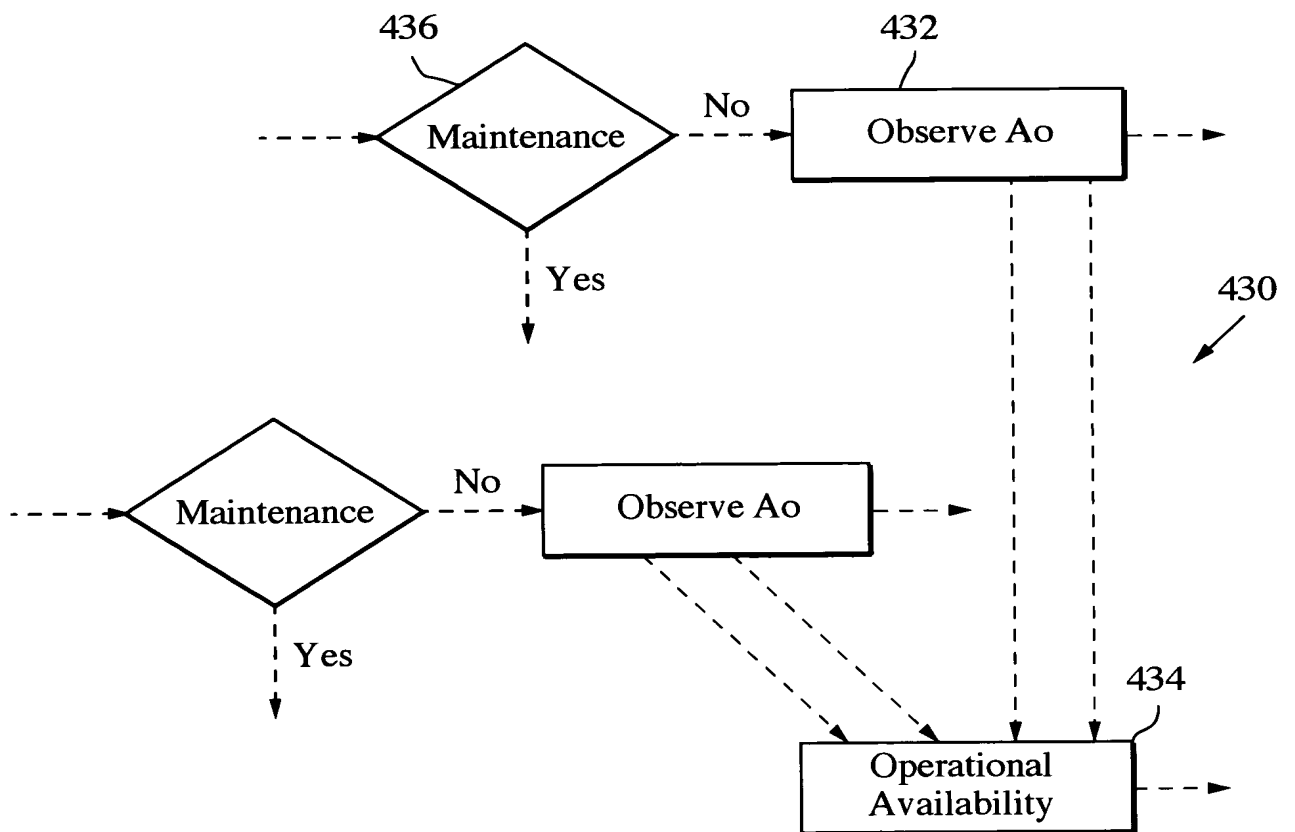


Fig. 19

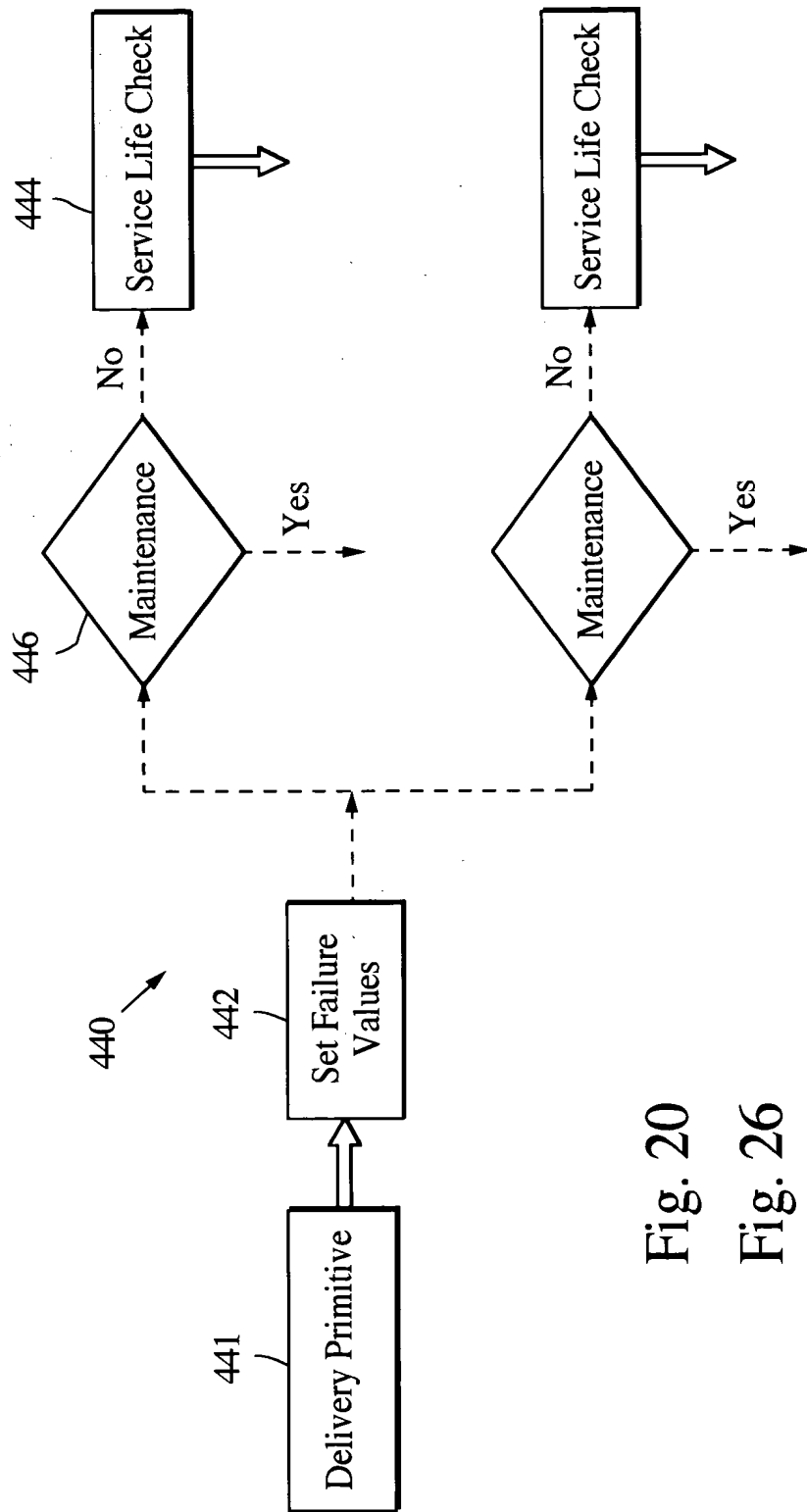
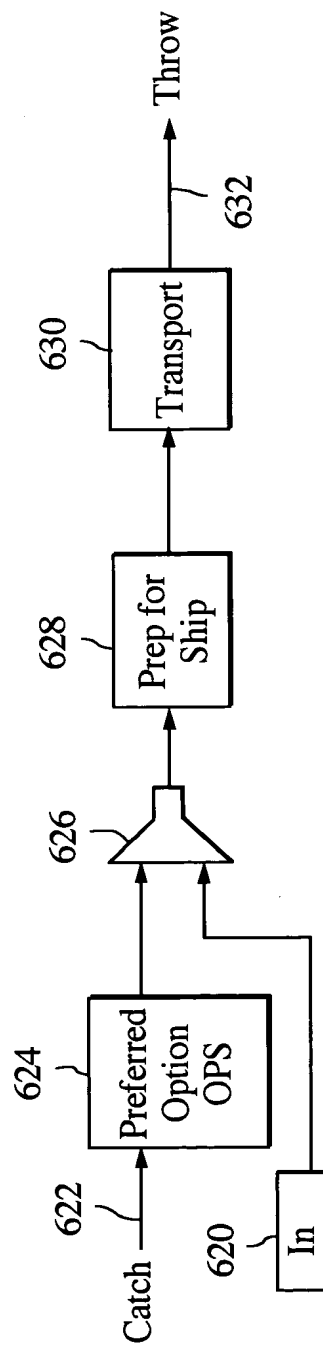


Fig. 20

Fig. 26



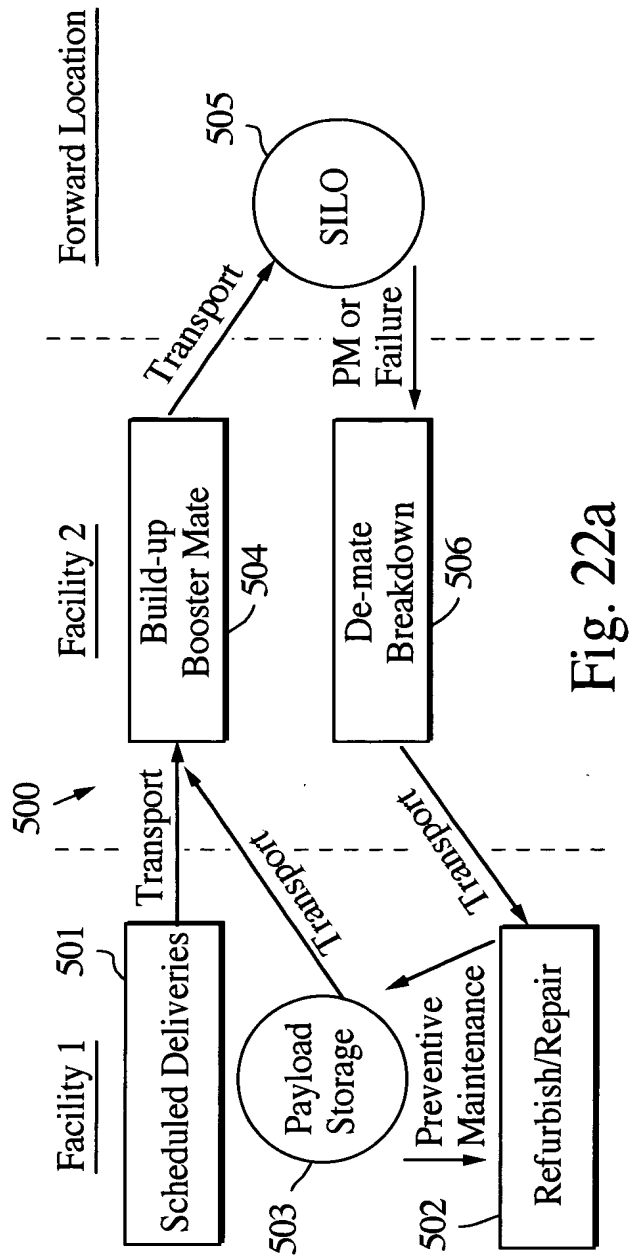


Fig. 22a

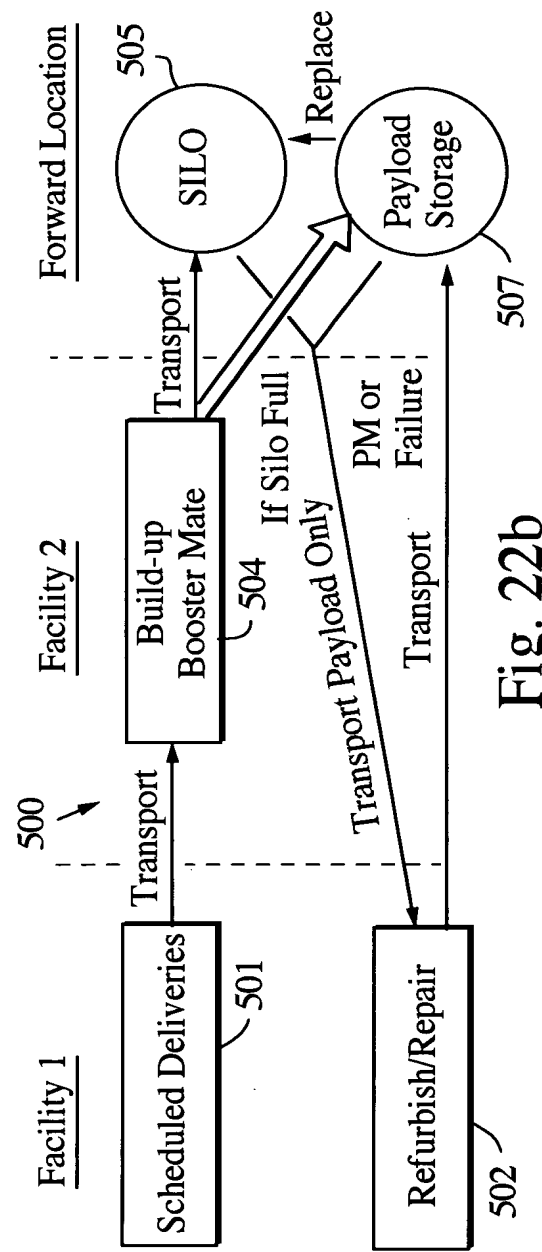


Fig. 22b

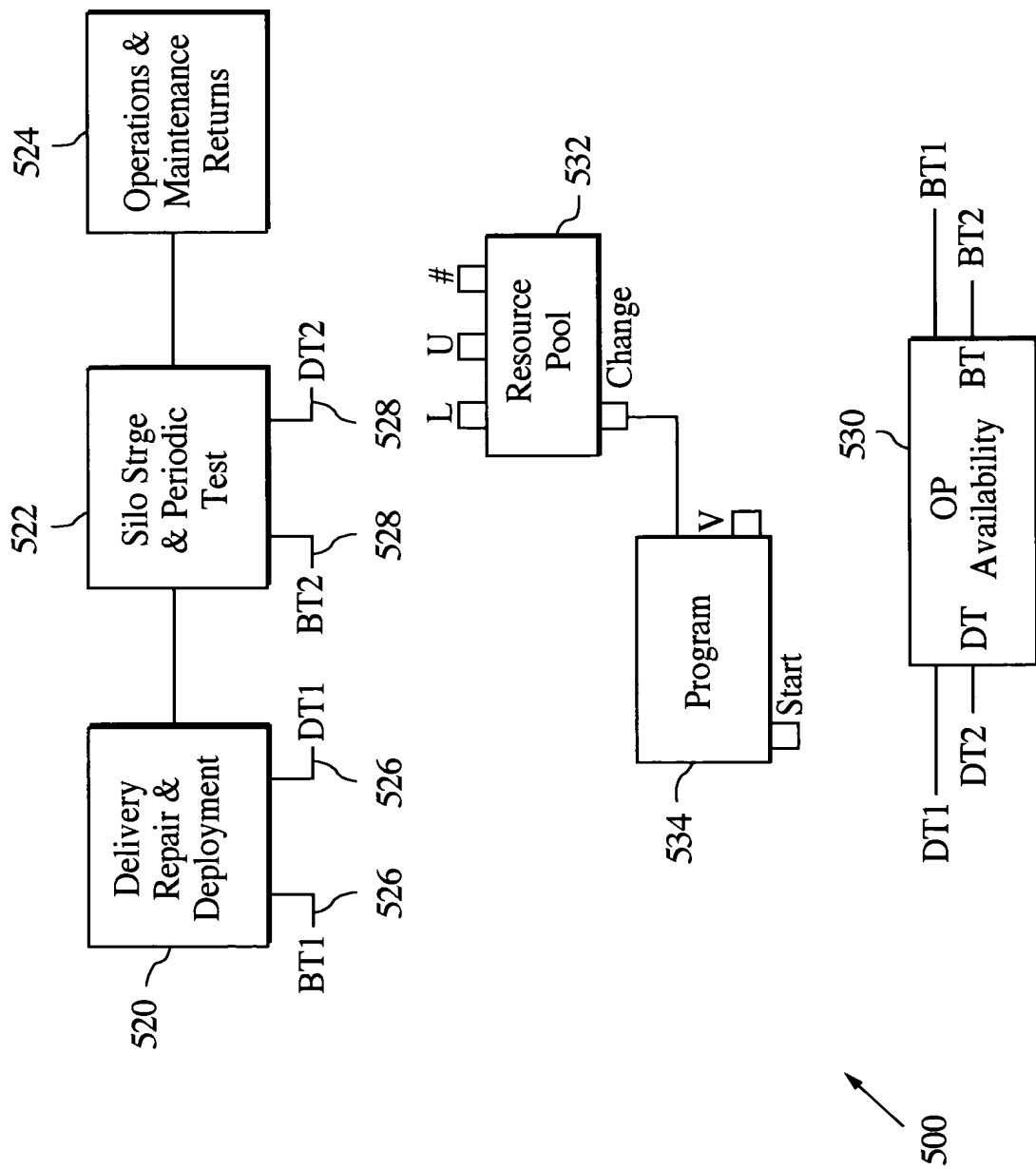
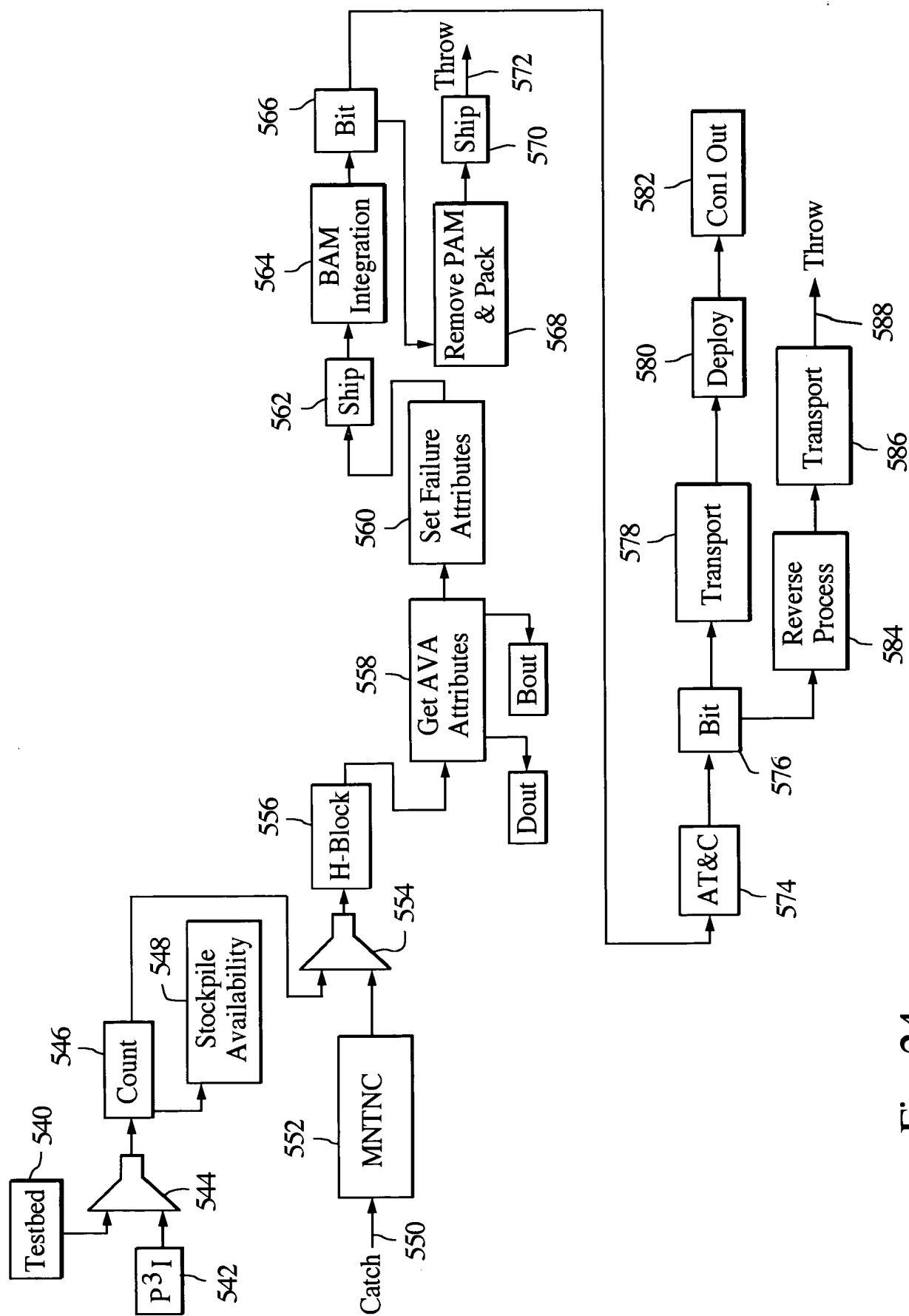


Fig. 23



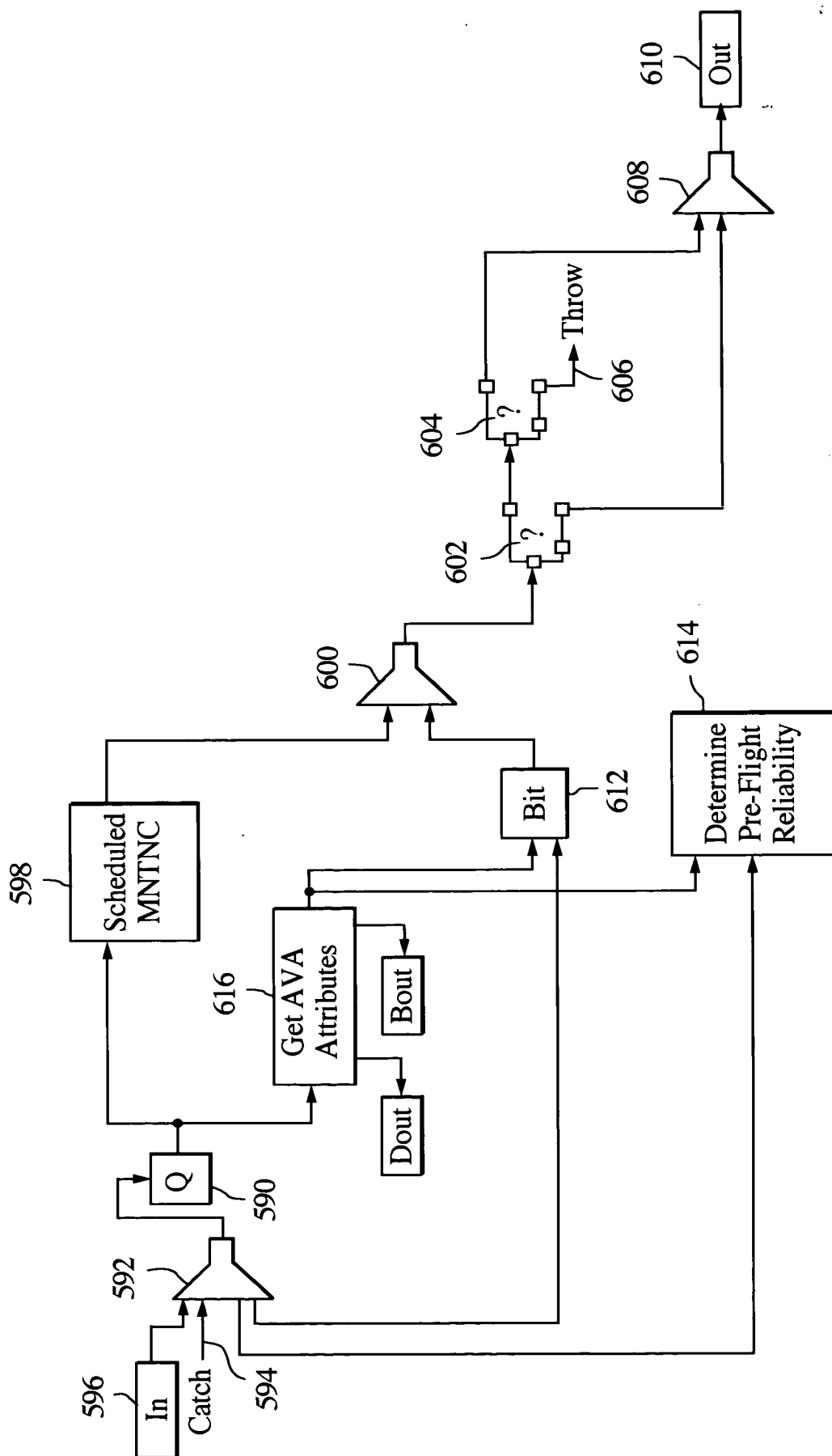


Fig. 25

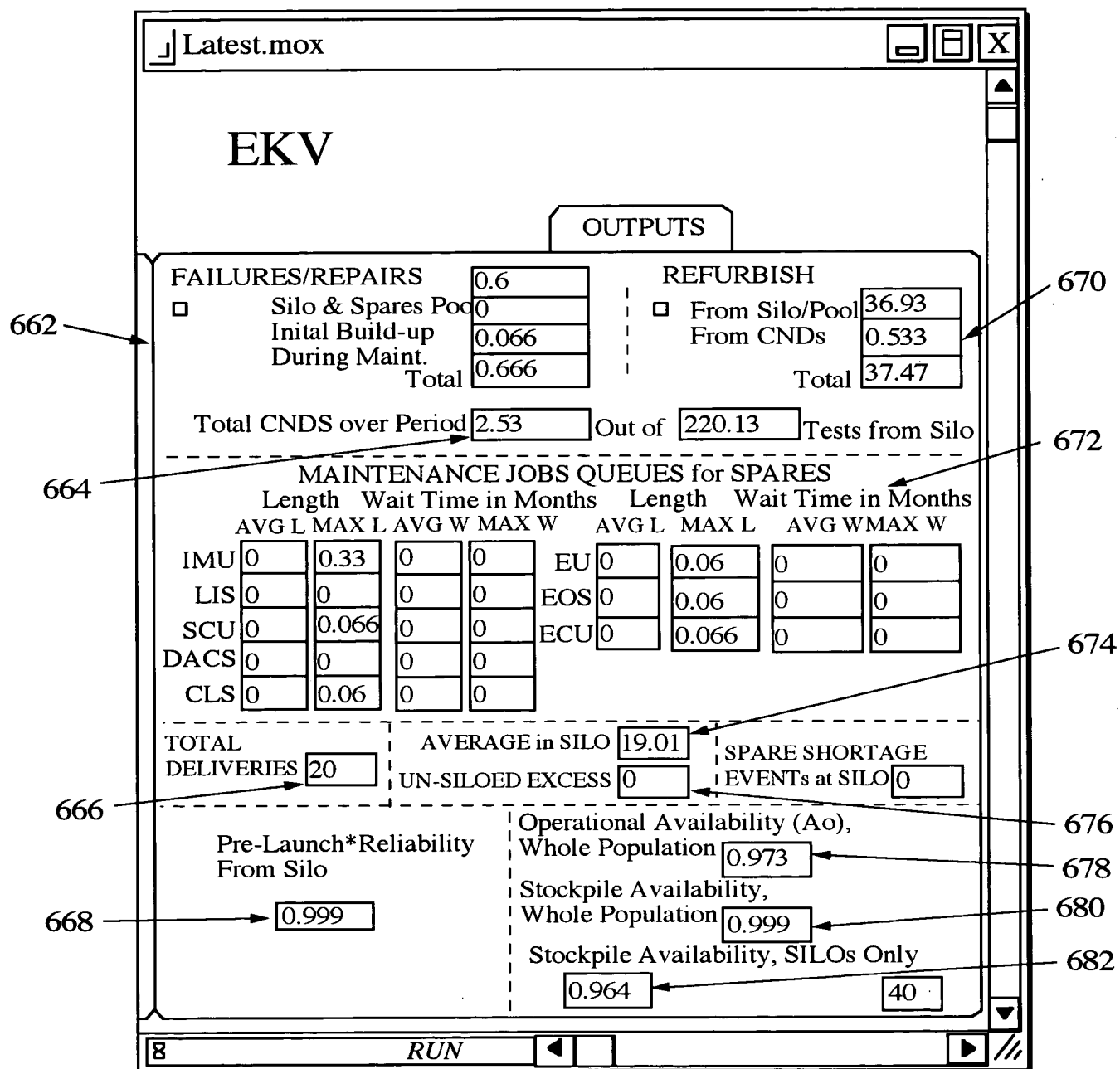


Fig. 27b